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Crew Error Doomed Flight 007

Fatal Path Apparently Set by Faulty Coding

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It was a nice warm day for Alaska—in the low 60s—when pilot Chun Byung-in, 45, and copilot Son Dong-Hwin, 47, climbed into the cockpit of their Korean Air Lines Boeing 747 to fly themselves and 267 other people from Anchorage to Seoul.

They settled in their seats in the bulbous nose of the 747 and went through a routine that many specialists, including those at the CIA, say they believe doomed the plane before it left the ground.

The 240 passengers in the Anchorage terminal—the 29 other people on Flight 007 were KAL employees—had no way of knowing that a quirk in the way the crew was fiddling with the black boxes in the cockpit of their airliner was going to send them over Soviet territory and to a horrible, screaming, nine-minute plunge to their deaths into the Pacific Ocean.

Aug. 31, 1983, the day of takeoff, seemed dull, even on Page 1 of the Anchorage Daily News. "Alaska netter invited to U.S. Open" and "41,000 students will answer the bell today" were the hottest items the News could find to put in boxes above its masthead. Another story on Page 1 was a plea from the Democratic national chairman to find somebody good to run against Sen. Ted Stevens (R-Alaska).

Pilot Chun and copilot Son were old hands at setting up the black boxes in the cockpit for the eight-

hour flight during which they would be out of reach of friendly radios and radars on the ground.

One flier was to read out the latitude and longitude of where the 747 was parked in Anchorage; the other was to punch the numbers into the plane's computer. He did this by pressing squarish keys on a black box on the console between their seats.

The numbers punched on the tiny keyboard showed up in the narrow plastic window along the top edge of this all-important box: the Litton LTN 72 Inertial Navigation System (INS).

Its accelerometers and gyroscopes were to "feel" where the plane was flying and guide it from Anchorage to the Seoul airport. The INS mechanical brain had no way to check whether the humans had given it the exact starting point by punching the correct keys.

The pilot's manual for setting up the LTN 72 for a long flight warned: "The inertial platform must be aligned before the INS can be used as a precision inertial navigation system. This alignment requires entry of the aircraft present position and must be performed with the aircraft on the ground. About 15 minutes is required for the complete alignment." If the numbers that show up in the window are the correct latitude and longitude, the manual stated, "press INSERT button."

It is the "collective judgment" of the U.S. intelligence community, Sen. Patrick J. Leahy (D-Vt.) said in an interview, that the KAL crew hit a wrong number in making the critical geographical alignment in the plane's LTN 72 navigation system. Leahy, a member of the Senate Select Committee on Intelligence, said he recently was given an extensive briefing by U.S. intelligence officers

at CIA headquarters on the Soviets' shooting down of KAL Flight 007.

The INS, not knowing the course it was plotting was drawn from a starting point 10 degrees east of the actual one, guided the 747 and its crew and passengers to the right

of the safe route and into Soviet air space where a SU15 fighter pilot shot it out of the dark, pre-dawn sky over Sakhalin Island on Sept. 1.

Specialists at the Federal Aviation Agency, who also have made an exhaustive investigation of Flight 007, lean sharply toward the theory that the plane went off course into Soviet air space because a number was read out wrong or punched in wrong and not noticed as being wrong when it showed up in the display window of the LTN 72.

The International Civil Aviation Organization, in its final report on its Flight 007 investigation, supported the theory that a wrong number was punched into the computer before the plane's engines were started:

"It was possible to postulate that either the holding of a constant magnetic heading (246 degrees), or an undetected error of 10 degrees east in longitude was made in the insertion of the present (ramp) position into one of the three INS units, would have produced a track to the area of [KAL 007's] destruction that was also consistent with the radar track information provided by the USSR and by Japan.

"Each of those postulations assumed a considerable degree of lack of alertness and attentiveness on the part of the entire flight crew but not to a degree that was unknown in international civil aviation."

What many experts say they believe happened is that a crew member punched 3 rather than 4 on the INS keyboard, telling the computer that its starting point was a longitude of 139 degrees west rather than 149 degrees west.

ICAO concluded that punching one wrong key on one of the three INS units in the cockpit could have been enough to guide the 747 along the wrong path. The ICAO report added that there is no indication that anything was wrong with the plane or that the crew members "were aware that the flight was significantly deviating from their assigned route."

The 747 possibly came within the view of the Soviet SU15 as clouds obscured the moon and made identification of the South Korean plane difficult.